

of fore wing white, tinged with yellow on disk, the costal area irrorated with red-brown; hind wing orange-yellow, the costal area white, irrorated with red-brown except towards base, the terminal band formed by red-brown irroration.

Hab. E. TURKESTAN (*Avinoff*), 1 ♀ type. *Exp.* 22 mm.

(7 a) *Noctuelia josialis*, sp. n.

♂. Head and tegulae orange-yellow, the latter with black-brown patches at tips glossed with blue, with orange-yellow stripes at sides and the patagia with some orange-yellow scales; abdomen black-brown with a cupreous gloss and orange-yellow subdorsal stripes, the genital tufts white; antennae black: frons with black patch; palpi black, the basal joint and base of 2nd joint yellow; femora whitish tinged with brown; ventral surface of abdomen with white stripe except at extremity. Fore wing black-brown with a cupreous gloss; an orange-yellow fascia along median nervure to near termen where its extremity is rounded; an orange-yellow streak on inner margin. Hind wing black-brown with a cupreous gloss; a broad orange-yellow stripe in and below the cell to near termen, extending to inner margin at base and narrowing somewhat with its lower edge oblique beyond the cell.

Hab. VENEZUELA, Esteban Valley, Las Quiguas, 1 ♂ type. *Exp.* 30 millim.

XXXVII.—*On the Synonymy of some European Diplopods (Myriapoda), with Special Reference to Three Leachian Species.* By RICHARD S. BAGNALL, F.L.S.

ONE of the drawbacks to students of British Myriapods undoubtedly lies in the unsatisfactory state of the nomenclature. When one remembers that, amongst the Diplopods, there are so many instances of two (or more) species being so closely related as to be practically indistinguishable, except by a dissection and study of the male, one at once realizes how difficult it must be for a discoverer of a species so closely allied to one already known to decide which of the two was the one described by an older naturalist at a time when present-day methods were not used.

A case in point: *Brachyiulus pusillus*, a graceful little Julid with a pair of yellowish stripes down the back, was described by Leach from Edinburgh and London more than a hundred years ago. In recent years Verhoeff showed that there were two species, externally alike but abundantly

distinct in the structure of the male gonopods etc., describing one of them as new under the name of *Brachyiulus littoralis*. The dissection of male examples, however, from an abundance of British material proves that all our examples are referable to Verhoeff's species. Surely, by deduction, one must refer the British material to Leach's species, and so sink Verhoeff's name as a synonym. And, further, another name must be found for the *pusillus* of Verhoeff (non Leach).

The present memoir is an attempt to show my deductions as to the true synonymy of three of Leach's species, from which it will be seen that new names will have to be found for *Craspedosoma rawlini*, Verhoeff (non Leach), and *Brachyiulus pusillus*, Verhoeff (non Leach). As existing names (now sunk as synonyms) may be found applicable, I leave this question to more capable hands. I have, however, suggested a new name for *Craspedosoma simile*, Attems (non Verhoeff), the issue in this instance not being complicated by old synonymy.

Of four of Leach's memoirs on Myriapods containing practically the same subject-matter, I have perused the following:—

Leach, W. E. 1814-15. "A Tabular View of the External Characters of Four Classes of Animals, which Linné arranged under Insecta; with the Distribution of the Genera composing Three of these Classes into Orders &c., and Descriptions of several new Genera and Species." In Trans. Linn. Soc. Lond. vol. xi. (1815) pp. 306-400 (Class II. Myriapoda, pp. 376-386).

Leach, W. E. 1817. "The Characters of the Genera of the Class Myriapoda, with Descriptions of some Species." In the 'Zoological Miscellany,' iii. pp. 36-45 (with 10 plates).

The following extract is from the first of these references:—

[p. 379] "Spec. 7. *Julus pusillus*.

"J. Segmento ultimo submucranato, corpore cinerascente nigro aut fusco-brunneo lineis duabus rufescentibus.

"Long. Corp. 5 ad 6 lin.

"Habitat prope Edinburgum sub lapidibus; in Battersea fields, Londinum prope, inter graninum radices.

"Copulatione observavi.

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"β. Corpus rufescens lateribus lineaque longitudinale dorsali fuscis brunneis.

"Dorsum lineis fortioribus exaratis, distantibus rectis sub-inaequalibus. Antennæ fuscae articulis dilutis. Pedes lutescentes.

"Gen. 3. CRASPEDOSOMA.†

[Footnote] "† This genus was proposed by my much lamented friend Richard Rawlins, Esq., who discovered the first species.

"Corpus lineare, depressum, segmentis lateraliter compressis, marginatis. Antennæ articulo secundo tertio brevior.

"* Segmentis lateribus medio prominulis.

"Spec. 1. *Craspedosoma Rawlinsii*.

"C. dorso fusco-brunneo lineis quatuor punctorum albidorum, ventre pedibusque rufescentibus.

"Long. Corp. 7 lin.

"Habitat inter muscos et sub lapidibus prope. Edinburgum vulgatissima. Detexit R. Rawlins cujus nomen gerit.

"** Segmentis lateribus postice productis.

"Spec. 2. *Craspedosoma polydesmoides*.

"C. dorso rufo-griseo, ventre pallido, pedibus rufescentibus basi pallidis, angulo segmentorum postico setifero.

"Habitat in Daemoniâ prope Plymouth, sub lapidibus passim. Detexit Dom Montagu.

"Corpus rufo-griseum, pedibus pallidioribus. Dorsum lineâ longitudinaliter impressum. Segmenta valdè prominentia angulo antico rotundato; postico retrorsum producto, setifero setâ conicâ albâ. Facies saturate rufo-grisea. Oculi atrii. Antennæ rufo-griseæ sub-pilosulæ. Venter pallidus, albidus. Pedes rufescentes, basi pallidi." [End of p. 380.]

Brachyiulus pusillus (Leach), non Verhoeff.

Syn. *Brachyiulus* (*Microbrachyiulus*) *littoralis*, Verhoeff.

Julus pusillus, Leach, 1814, Trans. Linn. Soc. Lond. xi. p. 379; 1817, Zool. Misc. iii. p. 35.

In 1917 I brought forward *B.* (*Microbrachyiulus*) *littoralis*, Verhoeff, as British on the strength of a large number of

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examples found at Ainsdale, near Southport, in April 1916, which were kindly identified by Brölemann. Since then I have taken examples of the same species in the Forth Area of Scotland, in the counties of Northumberland and Durham, both inland and on the coast, and in other localities, including the South Coast at Swanage. In every case expert examinations of the males were made by Mr. and Mrs. Brade-Birks, proving the species to be Verhoeff's *littoralis*.

Leach described *J. pusillus* from Edinburgh and London, and as I have secured material from one of these localities, and no British examples as yet dissected have been found to be referable to *pusillus* as diagnosed by Verhoeff, one is forced to the conclusion that when he demonstrated that there were two allied species, Verhoeff unfortunately gave the name *littoralis* to what was in reality Leach's species. I may have the opportunity this winter of going into the question of how far Verhoeff followed previous continental authors as regards *B. pusillus*; in any case, a new name must be found for *B. pusillus* of Verhoeff (non Leach), but as the names *boleti*, Am Stein (1857) and *stuxbergii*, Fanzago (1875), are given as synonyms of *pusillus* by Latzel, and might be referable to either species, I dare not go further in the matter just now.

Craspedosoma rawlinsii, Leach.

Syn. *Craspedosoma simile*, Verhoeff, non Attems.

Craspedosoma rawlinsii, Leach, 1814, Trans. Linn. Soc. Lond. xi. p. 380; 1817, Zool. Misc. iii. p. 36, pl. cxxxiv. figs. 1-5.

Craspedosoma rawlinsii, Samouelle, 1819, The Entomologist's Useful Compendium, p. 114.

Craspedosoma rawlinsii, var. *simile*, Verhoeff, 1891, Berl. Ent. Zeitsch. xxxvi. pp. 129-130.

Craspedosoma simile, Verhoeff, 1910, Sitzungsber. Ges. Naturf. Freunde, no. 1, pp. 19-62, figs.

Verhoeff first described his *simile* in 1891 as a variety of *rawlinsii*, but later raised it to specific rank, and in 1910 (reference above cited) he reviewed the genus *Craspedosoma* (pp. 30-55) and gave the tables of his subdivisions, species, and subspecies. That the species he regards as *rawlinsii* and *simile* are well characterized is distinctly demonstrated, but here again I contend that Verhoeff's species should be referred to the species Leach described.

In 1912 I sent Verhoeff specimens of *Craspedosoma* from Gibside, County Durham, which he returned as *C. simile* and

C. simile rhenanum, and as such I recorded them*. Examples identified by Ellingsen from Norway (a large series) were all referred to *simile* (and subspecies and varieties thereof) by Verhoeff (Zool. Anz. xxxix. pp. 499-511, May 1912), whilst the *C. rawlinsii* recorded from Holland in moles' nests by Father Heselhaus, S.J. (Tijdschrift voor Ent. lvi. 1913, p. 240), was later (*l. c.* lvii. 1914, p. 80) referred by Verhoeff to *simile*. It therefore seems that no examples of what he regards to be *rawlinsii* have been examined by Verhoeff from our faunal area, all so named being referred to *simile*, and until the reverse is proved I consider it distinctly advisable to regard Verhoeff's *simile* as a synonym of *rawlinsii*, Leach. In the meantime, it is to be hoped that more British examples may be secured for study.

Thus a new name is necessary for the *rawlinsii* of Verhoeff (non Leach), but as Latzel gives the names *marmoratum*, C. K. (1847), and *gibbosum*, Am Stein (1857), as synonyms, it would not be wise to suggest a new name without further research.

Craspedosoma leachi (nom. nov.), Bagn.

Syn. *Craspedosoma simile*, Attems (non Verhoeff), 1895, Sitz. k. Akad. Wiss. Wien, math.-naturw. Cl. civ. pp. 75-76.

A species allied to *mutabile*, Latz. When Attems described it he was aware of Verhoeff's var. *simile* of *rawlinsii*, but the raising of this form to specific rank rendered it necessary to give another name to Attems's species.

Polymicrodon polydesmoides (Leach).

Syn. *Polymicrodon latzeli* (Verhoeff).

Craspedosoma polydesmoides, Leach, 1814, Trans. Linn. Soc. Lond. xi. p. 380; 1817, Zool. Misc. iii. p. 36, pl. cxxxiv. figs. 6-9; Samouelle, 1819, The Entomologist's Useful Compendium, p. 114.

Atractosoma polydesmoides of later British authors.

Atractosoma latzeli, Verhoeff, 1891, Berl. Ent. Zeitsch. xxxvi. pp. 127-128, figs. 4-6.

Polymicrodon latzeli, Verhoeff, 1897, Berlin. Archiv. f. Naturgesch. i. pp. 129-138; 1912, Trans. Nat. Hist. Soc. Northumberland & Durham, n. s., iv. pp. 159-166, pl. x. figs. 4-7.

Also *Polymicrodon latzeli* of recent authors.

Atractosoma latzeli was described by Verhoeff in 1891 from the south of England, his description being based upon

* "Brief Records of *Chatechylene vesuviana*, Newp., and other Myriopods new to the British Fauna," The Zoologist, July 1912.

a solitary poorly preserved male example, and six years later the same author instituted the genus *Polymicrodon* for that species. In 1911 I submitted numerous examples of *P. latzeli* to Verhoeff from the north of England, who (1912) wrote at some length upon this material. Nowhere have I seen any attempt to show how *latzeli* differs from Leach's species *polydesmoides*, described somewhat over a hundred years ago (and figured) from South Devon, of which Samouelle says "inhabits Devonshire under stones. It is common all along the borders of Dartmoor and on the southern coast. It was once taken by Dr. Leach in the garden of the British Museum."

I have twice stated that there appeared to be two allied species, referring the commoner to *latzeli* and the rarer to *polydesmoides*; but in recent years I have made a closer study of the Diplopoda, and I am convinced that the so-regarded rarer species is in reality the later larval stages of *latzeli*.

Verhoeff states (1912, p. 165) that the occurrence of *P. latzeli* in the north of England is very noteworthy from the zoogeographical point of view "since this is the first time that a Craspedosomid of 'Atractosoma-habit' has been recorded from the northern region affected by the Ice Age. This is by far the most northerly record for any such Craspedosomid." As a matter of fact, the species is not uncommon in Scotland and is one of the commonest Diplopods in the northern counties of England; it is probably as common in the midlands and the south, where I have collected it in North and South Devon, Bath, Oxford, Swanage, Portsmouth, Isle of Wight, and in the London district.

I see no grounds whatever for the retention of the name *latzeli*, which I consider must fall as a synonym of *polydesmoides*.

XXXVIII.—New Lepidoptera in the Joicey Collection.

By LOUIS B. PROUT, F.E.S.

Family Zygaenidæ.

1. *Caprima chrysosoma*.

♀.—31 mm.

Head and body orange-ochreous; antennal shaft blackish, with blue irroration (tips lost); tarsi blue-blackish on upper side; tibial spurs almost entirely atrophied.